

SOV/101-59-5/2/11

The Automatic Regulation of the Charging of Tube-Ball Mills

amount of material fed into the mill (Figure 1). Regulation of the charging is done by the "Pendan" type dosing device, in which a belt conveyor functions simultaneously as a weigher and as a feeder. Such an arrangement maintains a definite relation between the variable amount of the material charged into the chamber and the position of the dose distributor. Figure 2 shows the above arrangement. A static regulation of the charging of chamber I of the raw material mill is shown in Figure 3. This regulation assembly has been tested at the "Oktyabr'", Nizhne-Tagil'skiy and Leningradskiy tsementnyye zavody ("Oktyabr'", Nizhniy-Tagil and Leningrad Cement Plants). Automatic regulation increases the productivity of the mills by about 5 to 10%. The authors conclude that depending upon the readiness of the plant, automatic regulation will be introduced at all cement plants, using the wet grinding process.

There are 3 diagrams.

GIRSHOV, L. A. (Leningrad); GEL'MAN, I. V. (Leningrad); DOBRIN, L. A.  
(Leningrad)

Some engineering methods for analyzing control objects with  
monotonous transitive functions. Avtom. i telem. 23 no.9:  
1210-1214 S '62. (MIRA 15:10)

(Automatic control)

NESMEYANOV, A.N.; NOGINA, O.V.; BERLIN, A.M.; GIRSHOVICH, A.S.; SHATALOV, G.V.

Acyl and alkoxyl derivatives of bis-(cyclopentadienyl)titanium and  
the refraction increment of the  $-C_5H_5Ti$  group. Izv. AN SSSR  
Otd.khim.nauk no.12:2146-2151 D '61. (MIRA 14:11)

1. Institut elementoorganicheskikh soyedineniy Akademii nauk SSSR.  
(Titanium compounds)

L 18184-63 EWP(j)/EPF(c)/EWT(m)/BDS ASD Pc-4/Pr-4 RM/MAY/WW  
ACCESSION NR: AP3006746 S/0190/63/005/009/1284/1287 70  
63

AUTHOR: Korshak, V. V.; Sladkov, A. M.; Luneva, L. K.; Girshovich,  
A. S.

TITLE: Synthesis and study of polymers containing allyloxytitanocene

SOURCE: Vy\*sokomolekulyarny\*ye soyedineniya, v. 5, no. 9, 1963,  
1284-1287

TOPIC TAGS: titanium compounds, titanocene, dicyclopentadienyl-  
titanium(IV) dichloride, allyl alcohol, allyloxytitanocene,  
allyloxydicyclopentadienyltitanium(IV) chloride, synthesis, polym-  
erization, polymer, dicyclopentadienyltitanium(IV) dichloride,  
trimer, styrene, methyl methacrylate, copolymerization, copolymer,  
allyloxydicyclopentadienyltitanium(IV). polymer with styrene,  
styrene. polymer with allyloxydicyclopentadienyltitanium, allyloxy-  
dicyclopentadienyltitanium(IV). polymer with methyl methacrylate,  
methyl methacrylate. polymer with allyloxydicyclopentadienyltita-  
nium, copolymer structure, copolymer property

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ACCESSION NR: AP3006746

ABSTRACT: The synthesis of allyloxytitanocene [allyloxydicyclopentadienyltitanium chloride] (I) and its polymerization and copolymerization with styrene or methyl methacrylate have been studied. After an unsuccessful attempt to synthesize bis allyloxytitanocene [bis(allyloxy)dicyclopentadienyltitanium] from 1 mol titanocene [dicyclopentadienyltitanium dichloride] and 2 mols allyl alcohol, I was prepared from stoichiometric amounts of the starting materials in the presence of ammonia to bind HCl. The structure of I was determined by IR spectroscopic analysis. Polymerization of I in toluene solution at 100C for 10 hr in the presence of 0.1% benzoyl peroxide yielded the trimer of I, as shown by molecular-weight measurements and IR and elemental analysis data. Copolymers of I, together with polystyrene or poly(methyl methacrylate), were produced by heating 10% I solutions in styrene or methyl methacrylate at 120C for 3 hr in the presence of 0.5% benzoyl peroxide. The copolymers are orange transparent solids with molecular weights of 22,100 and 70,000. IR spectroscopic analysis of the copolymers showed that the titanocene groups [sic] are located in the side chains and that the backbones of the copolymers differ from those

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ACCESSION NR: AP3006746

of polystyrene and poly(methyl methacrylate). The softening point of the copolymer with styrene (120C) is higher than that of polystyrene (100C). Orig. art. has: 2 figures.

ASSOCIATION: Institut elementoorganicheskikh soyedineniy AN SSSR  
(Institute of Organoelemental Compounds, AN SSSR)

SUBMITTED: 23Dec61

DATE ACQ: 30Sep63

ENCL: 00

SUB CODE: CH

NO REF SOV: 003

OTHER: 002

GIRSHOVICH E.A.

ZVYAGIN, L.M., kandidat meditsinskikh nauk; GIRSHOVICH, E.A.; SOMOVA, V.V.

Transfusion of N.G. Belen'kii's therapeutic serum in insufficient lactation. Akush. i gin. no.3:51-54 My-Je '55 (MLRA 8:10)

1. Iz gosspital'noy khirurgicheskoy kliniki (zav. kafedroy-prof. F.G.Uglov) i akushersko-ginekologicheskoy kliniki (zav.kafedroy-prof. I.I.Yakovlev) i Leningradskogo meditsinskogo i stituta imeni akad. I.P.Pavlova)

(LACTATION DISORDERS

hypogalactia, ther.,serum of Belen'kii)

(BLOOD SERUM

serum of Belen'kii in ther. of hypogalactia)

GIRSHOVICH, M.G.

High-speed machine-tool attachments for small-lot production. Stan.i  
instr. 31 no.10:34-35 O '60. (MIRA 13:10)  
(Machine tools—Attachments)

ACC NR: AP6021831

SOURCE CODE: UR/0413/66/000/012/0171/0171

INVENTOR: Girshovich, M. G.; Kilyakov, A. D.; Kozhevin, I. A.

ORG: None

TITLE: Stocks for assembling cylindrical and tapered aircraft sections. Class 87, No. 183136

SOURCE: Izobreteniya, promyshlennyye obraztsy, tovarnyye znaki, no. 12, 1966, 171

TOPIC TAGS: aircraft industry, aircraft fuselage, aircraft maintenance equipment

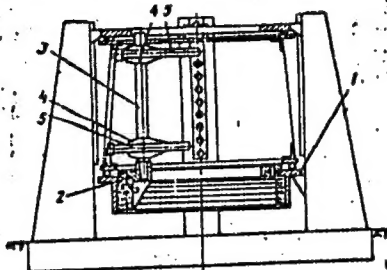
ABSTRACT: This Author's Certificate introduces: 1..Stocks for assembling cylindrical and tapered sections and other similar structures. The section end ribs rest on joint rings which are fixed to mutually parallel horizontal support plates. The lower plate is fixed while the upper plate can be moved. These plates are located between vertical columns which in turn are rigidly fixed to a stationary base. Setup time is cut during changeover from one type of assembly to another, and the number of required tools and attachments is minimized by equipping the stocks with a coordinate unit consisting of a lower support plate with a turret which can rotate about the vertical axis, a vertical bar which is fixed at the turret end and other supports which have horizontal bars. Each of these bars may be moved in a horizontal direction and carries a working tool such as a holding device or a trimming head. 2. A

Card 1/2

UDC: 621.757:629.13.012.2

ACC NR: AP6021831

modification of this device with a vertical bar equipped with a vernier scale. 3. A modification of this device for cutting setup time during assembly of periodically repeated batches of aircraft sections. The horizontal and vertical bars are equipped with slats, the lower support plate is fitted with rings, and the supports and turret have jig guides for boring index pin holes in the slats and rings.



1—lower support plate; 2—turret; 3—vertical bar; 4—supports  
5—horizontal bar

SUB CODE: 01,13/ SUBM DATE: 01Feb65

GIRSHOVICH, M.I.

112-1-1420

Translation from: Referativnyy Zhurnal, Elektrotehnika, 1957,  
Nr 1, p. 215 (USSR)

AUTHORS: Brik, Ye.A., Girshovich, M.I.

TITLE: Automation of the Drying-and-Impregnating Processes  
of Power Cables (Avtomatizatsiya sushil'no-propitochnogo  
protssessa silovykh kabeley)

PERIODICAL: Inform. tekhn. sb. M-vo elektrotekhn. prom-sti SSSR,  
1956, Nr 4(88), pp.19-21

ABSTRACT: Bibliographic entry

Card 1/1

GIRSHOVICH, M. V. Cand. Physicomath Sci.

Dissertation: "Geometrical Constructions on Lobachevskiy's Plane." Moscow State Pedagogical Inst. imeni V. I. Lenin 22 Dec. 1947.

SO: Vechernyaya Moskva. Dec. 1947 (Project #17836)

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CIA-RDP86-00513R000  
CIA-RDP86-00513R0005

GIRSHOVICH, M.V. (Kalinin)

Solvability conditions for second-degree constraint prob-  
lems on a Lobachevskii plane using a straightedge alone. Izv.  
vys. ucheb. zav.; mat. no. 5:26-38 '63. (MIRA 16:11)

Theory of the malleabilizing process. N. G. GUSEV and E. K. VIKHOREV. *Trudy Inst. Metals* (Moscow) No. 4, 3 (197), (English summary) 1979, 1920. — The authors explain the mechanism of graphitization and decarburization of white cast Fe. Direct formation of temper C takes place in the attainment of equilibrium after decomposition of all free cementite. The growth of castings is due to the decomposition of cementite and depends on the amount of temper C formed during annealing, and on the amount of C oxidized out of the cementite in the solid solution. G. E. ROSENBERG

METALLURGICAL LITERATURE CLASSIFICATION

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ca

PRECEDENTS AND PROPERTY IS INTER

Comparative oxidizability of graphite and temper carbon. N. G. GONSHOVICH AND  
I. K. VITUS. *Vestnik Metalloprochnosti* (Moscow) No. 11, 1951, 112-113. Re-  
view of recent research in Germany and results of capillary studies made at the Inst. of Metals  
in Leningrad explaining why malleable castings cannot be made from gray cast iron. R. I. S.

ASAC 15A METALLURGICAL LITERATURE CLASSIFICATION

ca

9

The effect of silicon on ductility of malleable iron. N. G. GINSBURG AND F. K. VIDIN. *Nodishkoviya Vsesoyuznogo Inst. Metal.* 1931, Nos 1-2, 30-3. In hard castings tensile strength increases and sp. gr. decreases with increase of Si, while hardness is not affected. Ductility gradually increases with Si content and shrinkage increases at first up to 0.40% Si and then decreases. In tempered samples Si showed no effect on tensile strength, while sp. gr. decreased with increase of Si. For the ordinary European malleable iron it is best to keep to the limits of 0.4-0.7% Si, depending on the amt. of S and tempering temp. The lower limit applies to low S and highly heated metal, while the upper limit applies to high S and low heating temp. S. L. MADONSKY

AS 51.1 METALLURGICAL LITERATURE CLASSIFICATION

ca

Melting black heart malleable iron in a cupola furnace.  
E. K. Vidin and N. G. Gushynin. *Repts. Inst. Metals*  
(Leningrad) No. 14, 3-11 (in German) (2)(1933). The  
cupola furnace is rarely used for the prepn. of malleable  
Fe, because of the excessive absorption of C into the  
metal in this type of furnace. A method has been worked  
out by which the Fe is first melted in a cupola and de-  
carburized to the required point in the blistering process.  
This method is used on a large scale at the Leger plant in  
Leningrad for the production of black heart malleable Fe  
of required content of Si, S, Mn and C. S. L. M.

ASB-55.4 METALLURGICAL LITERATURE CLASSIFICATION

PROCESSES AND PROPERTIES NOTES

CA

Production of low-carbon cast iron in a cupola furnace  
G. G. Gushchik. *Metalurg* 10, No. 5, 1955, 1955.  
Primarily from theoretical considerations, G. shows that  
steel scrap charged to a cupola furnace is carburized by  
the cupola gases above the tuyere zones. Below the  
tuyeres, carburization occurs because of contact with coke.  
The extent to which these reactions proceed depends on  
the temp., time of contact, properties of the coke and  
composition of the gases. To decrease the time of contact  
below the tuyeres, the tuyere zone may be lowered. A  
cupola thus constructed operated satisfactorily with a  
charge of 85% steel scrap and 15% Fe-Si. The cast iron  
produced contained 1.7% C and was hot enough to cast  
in thin sections.  
H. W. Rathmann

450 51.4 METALLURGICAL LITERATURE CLASSIFICATION

FROM PHYSICS  
METALLURGICAL LITERATURE CLASSIFICATION

**Desulfurization of cast iron during melting in the cupola.** P. P. Berg and N. G. Gimpovich. *Litensk. Delo* 1940, No. 8-9, 10-13. —Ordinary compn. and the concn. of S in metal and slag during melting in the cupola are such that there is no migration of S from the slag to the cast Fe. Desulfurization of the cast Fe with soda takes place by the formation of  $\text{Na}_2\text{S}$  and the soln. of FeS and MnS in soda slag. The desulfurizing action of soda is greater the greater the ratio of  $\text{Na}_2\text{O}$  to  $\text{SiO}_2$  and it is significant even with a 2nd treatment of the metal with the soda slags. *Reuse* of the slags a 3rd time is suggested. B. Z. Kamich

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GIRSH VICH, N. [G]

Cast-iron founding. A textbook  
Leningrad, Gos. nauchno-tekhn. izd-vo lit-ry po cherno i tsvetnoi metallurgii, 1949.  
708 p. (50-37376)

TN710.G5

GIRSHOVICH, N. G.

USSR/Metals - Cast Iron, Technology,  
Processes

Jan 52

"On Certain Theoretical Problems of Melting Cast  
Iron in a Cupola," N. G. Girshovich, Dr Tech Sci,  
Leningrad Polytech Inst imeni Kalinin

"Litey Proizvod" No 1, pp 20-23

Analyzes effect of various factors on melting  
process in cupola, such as: zones of combustion,  
excess of air, melting belt, compn of cupola gases  
and its relationship to temp in furnace, amt of  
air blown into cupola, productive capacity of  
cupola.

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~~GIRSHOVICH, N.G.~~

GIRSHOVICH, N.G.

USSR

Girshovich, N.G. Sotrudnik masters po chugunomu  
litaniyu (Skilled Workers on Iron Casting)  
Leningrad, Odeskaya, Nauch. Tekh. Institut' avtomatizirov-  
irovaniya i upravleniya. Leningrad, Otdel. 1955. 552  
pp.

*Handwritten signature*

1. GIRSHOVICH, N.G.
2. USSR (600)
4. Cast Iron
7. Disputable questions in the theory of graphitization, N.G. Girshovich, Lit. proizv. no. 4 '53.

9. Monthly List of Russian Accessions, Library of Congress, APRIL 1953, Uncl.

SOV 137-57-11-22365

Translation from Referativnyy zhurnal, Metallurgiya, 1957, Nr 11, p 246 (USSR)

AUTHORS Girshovich, N.G., Maksimov, S.K., Mikhaylov, V.A.

TITLE The Properties of Nodular Cast Iron at Elevated Temperatures and the Possibilities for its Employment as Reinforcement Metal (Svoystva chuguna s sharovidnym grafitom pri povyshen-nykh temperaturakh i vozmozhnost' yego ispol'zovanya dlya armatury)

PERIODICAL V sb.: Polucheniye otlivok iz vysokoprochnogo chuguna. Moscow, Izd-vo AN SSSR, 1955, pp 114-123

ABSTRACT An investigation was made of the mechanical properties of cast irons, namely, ferritic and pearlitic-ferritic malleable, inoculated gray, high-strength pearlitic (HSP) and ferritic (HSF), and cast steel (Nr 25 steel) at  $\leq 500^{\circ}\text{C}$  under short and long-term loadings.  $\sigma_b$  and  $\sigma_s$  diminish with increase in temperature. HSP shows the greatest strengths, and inoculated cast iron and ferritic malleable cast iron show the lowest, with Nr 25 steel, HSF, and pearlitic-ferritic cast iron occupying intermediate positions,  $\delta$  rising with temperature.  $\delta$  is highest in the case of Nr 25 steel and is followed by HSF, then

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SOV/137-57-11-22365

The Properties of Nodular Cast Iron at Elevated Temperatures (cont.)

HSP, etc. Long preliminary soaking at high temperature results in a decline in strength and a rise in  $\delta$ . High strength cast iron becomes brittle when held in the 400-550° interval. HSI reveals the maximum strength and the minimum rate of drop therein under long soaking. At 500°, the  $\sigma_B$  is as follows, in kg/mm<sup>2</sup>: 13.2 for HSP, 10.9 for Nr 25 steel, 0.1 for pearlitic-ferritic malleable cast iron, 8.0 for HSF, 7.4 for ferritic cast iron, and 7.0 for inoculated gray iron. Under these temperature conditions as well,  $\delta$  is higher for steel (16-22%) than for pig iron (6-12%). The increase in the cast iron at 500° is as follows in %: 0.2 for HSP and inoculated gray iron, 0.12 for pearlitic-ferritic malleable cast iron, 0.05 for ferritic malleable cast iron, 0.06 for HSF. At 425°,  $\sigma$  ductility is as follows, in kg/mm<sup>2</sup>: 7.8 for HSF, 6.1 for pearlitic-ferritic malleable cast iron, 5.6 for ferritic malleable cast iron, and 8 for Nr 25 steel. Direct tests of reinforcement show that when brittleness is eliminated high-strength cast iron is close to Nr 25 and may be used at temperatures of up to 425° and a nominal pressure of  $\leq 40$  kg/cm<sup>2</sup>.

Card 2/2

A 1.

Girshovich, N.G.

Effect of adding Khadloy and iron on mechanical properties of castings at elevated temperatures. N.G. Girshovich and L.V. Ioffe. *Lithuanian Proceedings* 1958, No. 7, 1-2. Tensile strength of iron castings, C 3.5, Mn 0.5, Si 0.5, P 0.02 and S 0.06% unalloyed and alloyed (comp. with 1.22% Cr and 0.22% Ni (modified with CuSi), 0.40% Cr and 0.22% Ni, 1.06% Cr and 0.68% Ni and heated for 100 and 800 hrs. at 380-600° is given in diagrams indicating that the presence of Cr and Ni reduces the softening effect of heating. This is connected with a comparative stability of a pearlitic matrix of the alloyed irons and grain structure of unalloyed. Creep strength results run for 10,000 hrs. parallel to those of the tensile testing. On the basis of data obtained a set of diagrams for determining the structure of these irons as a function of Si and C is given. (T. D. Galt)

for

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GIRSHOVICH, N.G., professor, doktor tekhnicheskikh nauk; NEKHENDZI, Yu.A.,  
professor, doktor tekhnicheskikh nauk.

Analytic solutions for simple problems on solidification of  
castings with varying configurations. Lit.proizv. no.4:13-17  
Ap '56. (MLRA 9:7)  
(Founding--Tables, calculations, etc.)(Solidification)

GIRSHOVICH, N.G., doktor tekhnicheskikh nauk; NEKHENDZI, Yu.A., doktor  
tekhnicheskikh nauk.

Analytic solution of simple problems on the solification of  
various configurational castings. Lit.proizv. no.6:14-18 Je '56.  
(MIRA 9:8)

(Solidification) (Founding)

GIRSHOVICH, N.G., doktor tekhnicheskikh nauk.

The shape of head metal. Lit.proizv. no.10:32 0 '56. (MLRA 9:11)  
(Founding)

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GIRSHOVICH, N. G.

GIRSHOVICH, N.G.; NEKHENZI, Yu.A.

Foundry practices in Leningrad. Lit.proizv. no.10:13 0 '57.

(MIRA 10:12)

(Leningrad--Founding)

GIRSHOVICH, N.G.; DLUGACH, L.S. [deceased]

New method for testing cast iron. *lit.proizv.* no.12:22-23 D '57  
(MIRA 11:1)

(Cast iron--Testing)

GIRSHAVICH N.G.

PHASE I BOOK EXPLOITATION 1216

Soveshchaniye po teorii liteynykh protsessov. 2d, Moscow, 1956

Zatverdevaniye metallov; trudy soveshchaniya... (Solidification of Metals; Transactions of the Second Conference on the Theory of Foundry Processes) Moscow, Mashgiz, 1958. 532 p. 3,500 copies printed.

Sponsoring Agencies: AN SSSR. Institut mashinovedeniya. Komissiya po tekhnologii mashinostroyeniya; and AN SSSR. Institut metallurgii.

Ed. (Title page): Gulyayev, B.B., Doctor of Technical Sciences, Professor; Ed. (Inside book): Novikov, P.G., Candidate of Technical Sciences; Ed. of Publishing House: Chernysheva, N.P.; Tech. Ed.: Uvarova, A.F.; Managing Ed. for Literature on Heavy Machine Building: Golovin, S.Ya., Engineer.

PURPOSE: This book is intended for a wide circle of engineers, technicians, and scientists working in the fields of general metallurgy, physical metallurgy, and the production of castings.

Card 1/8

Solidification of Metals (Cont.)

1216

COVERAGE: The book is a collection of 29 papers concerned with the determination of fixed patterns of metal solidification and also with the determination of favorable conditions for the production of sound castings. The authors discuss heat phenomena in metallic and sand molds, properties of mold materials, conditions of solidification of castings in shell molds, kinetics of the warming-up of porous bodies (molds), effect of alloy composition on the solidification process, conditions for the development of a zonal structure and of chemical heterogeneity of castings, and other matters of current interest. There are also discussions of the use of model testing and radioactive isotopes for studying solidification. No personalities are mentioned.

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Gulyayev, B.B., Doctor of Technical Sciences, Professor. Present State of Investigations of Metal-solidification Processes	5

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Solidification of Metals (Cont.)

1216

I. HEAT-TRANSFER PROCESSES IN THE SOLIDIFICATION OF CASTINGS

Berg, P.P. Principles for Constructing Production Formulas for  
Evaluating Heat Processes in the Casting Mold 33

Girshovich, N.G., Doctor of Technical Sciences, Professor; and  
Yu.A. Mekhendzi, Doctor of Technical Sciences, Professor.  
Solidification of Castings 39

Veynik, A.I., Doctor of Technical Sciences, Professor. Inves-  
tigation of Heat Phenomena in Metallic Molds and Their Effect  
on Solidification Processes 91

Gulyayev, B.B., Doctor of Technical Sciences, Professor; and  
O.N. Magnitskiy, Engineer. Investigation of the Effect of  
Alloy Composition on the Kinetics of the Solidification of  
Castings 108

Skvortsov, A.A., Candidate of Technical Sciences, Docent. On  
the Solution of the Problem of the Solidification of Metals  
Within a Temperature Range 124

Card 3/8

S07/163-58-1-11/53

AUTHORS: Girshovich, N. G., Nekhendzi, Yu. A., Lebedev, B. I.

TITLE: The Resistance to Cracking of Iron-Carbon Alloys (Treshchi-  
noustoychivost' zhelezouglerodistykh splavov)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya. 1958,  
Nr 1, pp 48-54 (USSR)

ABSTRACT: The resistance to cracking of iron-carbon alloys was quanti-  
tatively investigated. A special method based on the de-  
termination of the electric resistance was used for the in-  
vestigation of the resistance to cracking. A jump-like change  
in the electrical resistance is caused by the formation of  
cracks in the alloys.  
The alloys investigated in addition to carbon also contained  
0.35 - 0.45 % silicon, 0.7 - 0.8 % manganese, 0.035 % sulfur  
and 0.05 - 0.06 % phosphorus.  
Alloys with a content of 0.2 % carbon are characterized by  
a higher resistance to cracking. The decrease of the carbon  
content therefore causes sharp decrease in the resistance to  
cracking. Iron alloys with a graphite system have a higher  
resistance to cracking than alloys with a cementite system.

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The Resistance to Cracking of Iron-Carbon Alloys

SOV/163-58-1-11/53

The resistance to cracking of iron-carbon alloys as well as of the graphite and cementite systems was compared at a temperature of 50°C. The influence of sulfur and phosphorus on the resistance to cracking was investigated as well.

Phosphorus exerts a considerable influence on the resistance to cracking in the alloys only in the case of low sulfur content. In metallurgical investigations it is shown that in the case of a higher sulfur content the sulfides enclosed accumulate at the boundary of the primary crystals of the alloys, which fact represents a decrease in the intercrystalline strength, and which represents a factor promoting the formation of cracks.

The investigation of the influence of casting temperatures on the resistance to cracking shows that when the casting temperatures are raised the resistance to cracking is decreased. There are 4 figures, 3 tables, and 1 reference.

Card 2/2

ASSOCIATION: Leningradskiy politekhnicheskiy institut  
(Leningrad Polytechnical Institute)

SUBMITTED: October 4, 1957

AUTHORS: Girshovich, N. G., Nekrasov, Ya. A. SOV/163-88-2-12/46

TITLE: Determining the Duration of the Hardening in Casting Processes as a Scientific Method of Research (Opredeleniye prodlizheniya nosta zatverdevaniya otliivok kak nauchnykh issledovaniy)

PERIODICAL: Nauchnyye doklady vysshey shkoly. Metallurgiya, 1948, Nr 2, pp. 77-83 (USSR)

ABSTRACT: The analytical and experimental determination of the duration and the kinetics of the hardening in the casting process are of great theoretical and practical importance. In the hardening process the structure of the cast is formed. The determination of the duration of hardening may be used as a method for the scientific investigation, and from the results obtained the physical constant of the alloys, the characteristics of the phase diagram, the characteristics of the alloy, the characteristics of the alloys and also some mechanical properties of the alloys may be determined. The duration of hardening is expressed by the simple formula:

$$\tau = K \frac{Q_v^2}{\Theta_{crit}^2}$$

SC7/163-68-2-12/46

Determining the Duration of the Hardening in Casting Processes as a Scientific Method of Research

The dependence between the duration of hardening and the ratio

$\left(\frac{Q_v}{Q_{crit}}\right)^2$  is linear (see Fig 1). The prolongation of the

duration of hardening leads to a stabilization of the primary crystalline parts. The dependence between the duration of hardening and the size of the primary grains (P) of the alloys of the system Fe-Ni-Cr-C (with 0.12% C and 20% Cr) was found. There is a direct relation between the duration of hardening and the mechanical properties of the alloys. From the course of the hardening curves may be seen that three periods occur. The hardening conditions of steel have an effect on the character of the crystallization of the steel alloys. In the case of a slow hardening and a longer crystallization range the biphasic zone is very big. Alloys with an extended biphasic zone of the hardening process have a comparatively long period of the liquidus state. An important relation between the duration of hardening and the fluidity was found, which may be expressed

the following way:  $\lambda = f\left(t_E + \frac{T_0}{T_E}\right)$  ( $t_E$  = duration of harden-

SOV/67-58-1-12/46

Determining the Duration of the Hardening in Casting Processes as a Scientific Method of Research

ing). The results obtained and the calculations of the duration of hardening show that a new and valuable method was found which supplies useful information as to the character of the crystallization, the phase diagram, the fluidity, the physical constants and the mechanical properties. There are 5 figures and 2 references, 2 of which are Soviet.

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Polytechnical Institute)

SUBMITTED: October 1, 1957

*GIRSHOVICH N.G.*

117-58-5-23/24

AUTHOR: None Given

TITLE: All-Union Conference of Foundry Workers (Vsesoyuznoye soveshchaniye liteyshchikov)

PERIODICAL: Mashinostroitel', 1958, Nr 5, p 48 (USSR)

ABSTRACT: At the end of 1957, an All-Union conference took place in Moscow on scientific research in casting. After the plenary session the meeting broke up into the following 5 sections: iron casting, steel casting, technology of the casting form, non-ferrous casting, and equipment. A total of 45 reports were given. Representatives of the satellites also participated. V.M. Shestopal, Candidate of Technical Sciences (Giprostanok) reported on "The Latest in Projects of Foundry Shops and Plants". I.P. Yegorenkov, Candidate of Technical Sciences reported on "The Latest in Projects of Casting Machines". N.G. Girshovich, Professor and Doctor of Technical Sciences (LPI imeni Kalinin) reported on the important research work being accomplished in determining the continuity of solidification of castings. A.F. Landa, Professor, Yu.A. Litvintsev, Engineer and Florin of the Moskovskiy institut khimicheskogo mashinostroyeniye (Moscow Institut of Chemical Machine Build-

All-Union Conference of Foundry Workers

117-58-5-23/24

ing) reported on increased corrosion resistance and heat resistance of high-test iron with ball-shaped graphite. A.Ye. Krivosheyev, Professor of the Dnepropetrovskiy metallurgicheskiy institut (Dnepropetrovsk Metallurgical Institute) reported on "The Crystallization of Chilled Iron". B.S. Mil'man, Candidate of Technical Sciences (TSNIIMASH) reported on "The Formation of Ball-Shaped Graphite and Prospects for Receiving High Test Iron". N.D. Titov, Candidate of Technical Sciences (Automobile Plant imeni Likhachev) reported on "Conveyor Mass Production at ZIL". G.I. Kletskin, Candidate of Technical Sciences (Stankolit) spoke on "Improvements of the Process of Melting Iron in Cupola Furnaces". N.V. Gel'perin, Candidate of Technical Sciences (NII TSKhM) reported on "Production of Crank Shafts for Tractor and Harvester Engines". I.N. Frolov, Engineer of the Barnaul'skiy koteln'yy zavod (Barnaul Boiler Plant) reported on the centrifugal casting of important iron and steel parts. Ye.M. Baturin, Engineer, reported on "Risers in Exothermic Heat Treatment". N.Ya. Kogan, Engineer, (VPTI, GLAVNIIP at GOSPLAN USSR) reported on "A New Technology of Producing Large Castings in Mechanized

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All-Union Conference of Foundry Workers

117-53-5-23/24

Caissons". N.N. Belousov, Candidate of Technical Sciences and A.A. Dodonov, Engineer, K.G. Kovvi and E.G. Mednikov talked about casting under pressure by using a vacuum. G.S. Taburinskiy, Engineer (NIILITMASH) reported on automatic machines for shell moulds and cores. The work of the conference will be published in 1958.

AVAILABLE: Library of Congress

Card 3/3 1. Foundry workers-Conference-USSR

GIRSHOVICH, N. G.

PLANE I BOOK EXPLANATION 820/1959

Abdumalykovich, N. G. Institut metallurgii. Nauchnyy sovet po probleme termodinamicheskogo razvitiya sploynnykh i razryvnykh metallov. Moscow, Izdatel'stvo MFTI, 1959. 425 p. First ellip interval. 2,000 copies printed.

Ed. of Publishing House: V. A. Kiselev, Tech. Ed.: I. P. Kuznetsov, Editorial Board: I. P. Kiselev, Tech. Ed.: I. P. Kuznetsov, Academician, S. V. Agayev, Corresponding Member: USSR Academy of Sciences (Resp. Ed.), I. A. Odling, I. A. Reizer, and I. P. Zudin, Candidate of Technical Sciences.

PREFACE: This book is intended for metallurgical engineers, research workers in metallurgy, and may also be of interest to students of advanced courses in metallurgy.

CONTENTS: This book, consisting of a number of papers, deals with the properties of heat-resistant metals and alloys. Each of the papers is devoted to the study of the factors which affect the properties and behavior of metals. The effects of various elements such as Cr, Mo, and V on the mechanical properties of various alloys are studied. Deformability and the stability of certain metals as related to the thermal conditions of their operation are another study described. The problem of liquid metal corrosion of metals and the deposition of ceramic coatings on metal surfaces by means of electrolysis are examined. One paper describes the apparatus and methods used for growing single crystals of metals. Other papers describe the critical temperatures of various alloys, the behavior of steam in metal. Tests of turbine and compressor blades are described. No personalities are mentioned. References accompany most of the articles.

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Grishovitch, N. G.

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PHASE I BOOK EXPLOITATION

SGV/2117

Sovetskoye po eksperimental'noy tekhnike i metodam vysokotemperaturnykh issledovaniy, 1956

Experiments in high temperature and experimental techniques and methods of investigation of the properties of materials at high temperatures. Conference on Experimental Techniques and Methods of Investigation of the Properties of Materials at High Temperatures. Moscow, USSR, 1955. 202 p. 150 illustrations. 10 rubles. Institute of Metallurgy, Komissiya po fiziko-khimicheskim osnovam proizvodstva stali. 2,200 copies printed.

Resp. Ed.: A. M. Shapoval. Corresponding Member, USSR Academy of Sciences. Ed. of Publishing House: A. E. Smolovskiy.

PURPOSE: This book is intended for metallurgists and metallurgical engineers.

COVERAGE: This collection of scientific papers is divided into six parts: 1) thermodynamic activity and kinetics of high-temperature processes; 2) physical properties of materials; 3) physical properties of liquid metals and alloys; 4) physical properties of solid solutions of liquid metals and alloys; 5) physical properties of alloys; 6) physical properties of alloys. For more specific coverage, see Table of Contents.

Shapoval, Yu. M. Method of Measuring Electrical Conductivity of Molten Slags 306

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Grishovitch, N. G., and A. M. Shapoval. U-Shaped Test Specimen for Determining Fluidity of Alloys 318

Grishovitch, N. G., and Yu. A. Kuchinskii. Solidification and Related Phenomena as Functions of Physicochemical Constants of Alloys 351

Grishovitch, N. G., and N. A. Trubitsyn. Measurement of Linear Strainage and Resistance to Hot-Crack Formation in Steel 367

A versatile new instrument was developed for determining free linear strainage, hindered (or retarded) strainage, and resistance to hot-crack formation of hot-charged steel. The resistance of this instrument to the formation of hot cracks with a peritectic composition (about 0.2 percent C) exhibits maximum resistance sharply both with an increase and an increase in carbon content. But with an increase the resistance falls only slightly. At 0.2 percent C, the resistance falls only slightly. The amount of carbon has been related with the strain. The effect of manganese content and tearing temperature on hot-crack formation were also investigated.

Promov, A. P. Investigation of the Properties of Steel in the Liquid State and at the Temperature of Crystallization 384

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11

-GIRSHOVICH, Naum Grigor'yevich, doktor tekhn. nauk, prof.; IOFFE, A.Ya.,  
kand. tekhn. nauk, red.; GVIRTZ, V.L., tekhn. red.

[Present state of the graphitization theory] Sovremennoe sostoianie  
teorii grafitizatsii; obzor. Leningrad, 1959. 90 p. (MIRA 14:10)  
(Cast iron--Metallography)

SOV/148-59-2-13/24

18(3)

AUTHOR: Girshovich, N.G., Doctor of Technical Sciences, Professor

TITLE: The Problem of the Possibility of Graphite Crystallization From Oversaturated Homogeneous Austenite (K voprosu o  
vozmozhnosti kristallizatsii grafita iz peresyshchennogo  
odnorodnogo austenita)

PERIODICAL: Izvestiya vysshikh uchebnykh zavedeniy, Chernaya metallurgiya,  
1959, Nr 2, pp 107-109 (USSR)

ABSTRACT: The possibility of the spontaneous formation of graphite  
nuclei in oversaturated austenite was the subject of a  
discussion between Professors K.P. Bunin and V.F. Zubarev.  
Since the possibility of spontaneous nucleus formation was  
accepted for liquid smelts, the author suggests to apply this  
concept also for the solid state.

ASSOCIATION: Leningradskiy politekhnicheskii institut (Leningrad Polytech-  
nical Institute)

SOV/122-59-3-34/42

AUTHOR: Girshovich, N.G., Doctor of Technical Sciences, Professor

TITLE: "The Design Strength of Cast Iron with Spheroidal Graphite" (Konstruktsionnaya Prochnost' Chuguna S Sharovidnym Grafitom) by Kudryavtsev, I.V., Savvina, N.M., Baranova, N.B. et al. Mashgiz.

PERIODICAL: Vestnik Mashinostroyeniya, 1959, Nr 3, pp 86-87 (USSR)

ABSTRACT: Indifferent review.

Card 1/1

24(2)

GOV 123-50-7-13/05

AUTHOR: Girshovich, N.G., Doctor of Technical Sciences

TITLE: Interrelation Between the Processes of Solidification and Crystallization

PERIODICAL: Liteynoye Proizvodstvo, 1952, Nr 7, pp 31-34 (USSR)

ABSTRACT: The problem of solidification of liquid alloys is in the discussion stage: the physical process might be named solidification, but not so for the later starting crystallization, which has to be regarded as a physico-chemical process. These separate processes have been explained sufficiently in literature, but the interdependence of both these processes has not been examined sufficiently. The author accepts the experiments made by R.V. Lubov (Academy of Sciences, 1957) on Physico-Chemical Fundamentals of Steel Production as a basis. In connection with the existing differences of opinion with regard to the velocity of solidification and crystallization the author quotes

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SCN/120-50-7-13/85

Interrelation Between the Processes of Solidification and  
Crystallization

M. Ferry (in Tonderie, 1957, Nr 141). His latest re-  
search work (together with Yu. A. Nekhendzi published  
in Doklady Vysshey Shkoly, 1958, Nr 1) has proved  
that the transformation within the metal are not con-  
trolled by the crystallization but by the process of  
solidification. There are 4 diagrams and 9 references,  
7 of which are Soviet and 1 English

GIRSHOVICH, N.G.

СЛОНОВ И СВОИХ СТАЛИ

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М.Г.Горюхов	Качество изготовления изделий из стали
В.И.Ваня	Качество изготовления изделий из стали
В.Г.Горюхов	Структурные изменения в стали
С.А.Иванов	Влияние температуры на свойства стали
В.И.Иванов	Влияние температуры на свойства стали
А.С.Лобода	Влияние температуры на свойства стали
В.Г.Кузнецов	Влияние температуры на свойства стали
С.М.Горюхов	Влияние температуры на свойства стали
В.М.Тарнов	Влияние температуры на свойства стали
Ю.П.Ситников	Влияние температуры на свойства стали
В.М.Тарнов	Влияние температуры на свойства стали
Ю.П.Ситников	Влияние температуры на свойства стали
А.И.Иванов	Влияние температуры на свойства стали
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Ю.А.Иванов	Влияние температуры на свойства стали
В.П.Калашников	Влияние температуры на свойства стали

report submitted for the 5th Physical Chemical Conference on Steel Production, Moscow-- 30 Jan 1959.

GIRSHOVICH, A.G.

**TABLE 1. BOOK IDENTIFICATION**

Additional note 1988. Reading some of problems manuscript's solution. Additionally, to manuscript's opinion, can 6 (Twelve) editions of Most-Beloved Allah, Vol. 6) Moscow, 1960. 319 p. Even only inserted 3,000 copies printed.

**Sponsoring Agency:** Kentucky State Board of Education  
**Project:** Secondary Core Problems Statement Analysis Study.

[illegible]

**FURTHER:** This book is lauded for research written in the field of physics of metals and for mathematics, particularly in its writing on non-relativistic alloys.

[illegible]

Derfation, B. B., J. D. BARRY, and L. M. DICK. Investigation of the  
and of in estuaries and structure of some two-day kites, depending on their  
Complex time

W. J. A. J. and P. S. Smyth. Effect of structure stability on  
Bolted Bolted

Smalley, R. C., Jr., *Physicians*, and 0. V. Oshkerson. Effect of the Time Factor on the Character of the Diagonal Capillary Flow Resistance of the Two-Component System  $K_2Cr_2O_7 - H_2O - Al_2O_3$

Bartholomew, R.L., and T.A. Hildebratt. The Present State of the Problem of Karyomorphs in the Small Invertebrates of Solid Bodies

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Investigation of the Formation and Failure of Edge-Aligning Streebs

Y.T. Engleary, L.P. Khamatullin, and N.V. Ag. P.V. Oskine Properties of  
Barbiturate Alloys

Revelles, G.F., and S.B. Madsen. Involvement of the Pine Striptease of Empress in Beech-Bark Disease Activity

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5/2/92

Carl S. Nov. 6, 1911, N. C.

NEKHENDZI, Yu.A., prof., doktor tekhn.nauk, otr.red. (Leningrad);  
GIRSHOVICH, N.G., prof., doktor tekhn.nauk, red. (Leningrad);  
LEBEDEV, K.P., dotsent, red.; DLUGOKANSKAYA, Ye.A., tekhn.  
red.; SHCHETININA, L.V., tekhn.red.

[Modern achievements in foundry practice; transactions of the  
Intercollegiate Scientific Technological Conference] Trudy  
Mezhvuzovskoy nauchno-tekhnicheskoy konferentsii. Sovremennye  
dostizheniia liteinogo proizvodstva. Moskva, Gos.nauchno-  
tekhn.izd-vo mashinostroit.lit-ry, 1960. 338 p.

(MIRA 13:6)

1. Mezhvuzovskaya nauchno-tekhnicheskaya konferentsiya, 1957.  
(Founding)

GIRSHOVICH, N.G.

Effect of overheating during melting and modification on the  
properties of gray cast iron. *Int.proizv.* no.7:26-32 Je '60.  
(MIRA 13:7)

(Cast iron)

(Metals, Effect of temperature on)

NEKHEDZI, Yu.A.; GIRSHOVICH, N.G.; GRUZYKH, I.V.; BILYKH, V.Ya.;  
KUPTSOV, I.V.; SIMANOVSKIY, M.P.; ANTIPOV, M.V.

Foundry properties of heat-resistant alloys. Issl. po zharopr.  
splav. 6:308-313 '60. (MIRA 13:9)  
(Heat-resistant alloys) (Founding)

PHASE I BOOK EXPLOITATION SOV/5458

Girshovich, Naum Grigor'yevich, Doctor of Technical Sciences, Professor, ed.

Spravochnik po chugunnomu lit'yu (Handbook on Iron Castings) 2d ed., rev. and enl. Moscow, Mashgiz, 1961. 800 p. Errata slip inserted. 16,000 copies printed.

Reviewer: P. P. Berg, Doctor of Technical Sciences, Professor; Ed.: I. A. Baranov, Engineer; Ed. of Publishing House: T. L. Leykina; Tech. Eds.: O. V. Speranskaya and P. S. Frumkin; Managing Ed. for Literature on Machine-Building Technology (Leningrad Department, Mashgiz): Ye. P. Naumov, Engineer.

PURPOSE: This handbook is intended for technical personnel at cast-iron foundries. It may also be of use to skilled workmen in foundries and students specializing in founding.

COVERAGE: The handbook contains information on basic problems in the modern manufacture of iron castings. The following are discussed: the composition and properties of the metal; the making of molds; special casting methods; the charge preparation; melting

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Handbook on Iron Castings

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and modifying the cast iron; pouring, shaking out, and cleaning of castings; heat-treatment methods; and the inspection and rejection of castings. Information on foundry equipment and on the mechanization of castings production is also presented. The authors thank Professor P. P. Berg, Doctor of Technical Sciences, and staff members of the Mosstankolit Plant, headed by the chief metallurgist G. I. Kletskin, Candidate of Technical Sciences, for their assistance. References follow each chapter. There are 287 references, mostly Soviet.

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Handbook on Iron Castings

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GIRSHOVICH, N.G.

Analysis of preshrinkage expansion and the volume of shrinkage  
cavities in cast iron. Lit. proizv. no. 2:27-31 F '61.

(MIRA 14:4)

(Expansion (Heat)) (Cast iron—Defects)

GIRSHOVICH, N.G. (Leningrad); NEKHENDZI, Yu.A. (Leningrad)

Isotherms or lines of equal overheating? Izv. AN. SSSR. Otd.  
tekh. nauk. Met. i topl. no.3:140-142 My-Je '61. (MIRA 14:7)  
(Metals--Thermal properties) (Curves, Isothermal)

GIRSHOVICH, Naum Grigor'yevich, doktor tekhn. nauk, prof., red.;  
IOFFE, A.Ya., kand. tekhn. nauk, red.; BORODULINA, I.A.,  
red. izd-va; SHCHETININA, L.V., tekhn. red.

[Production and properties of cast iron with spheroidal  
graphite] Polucheniye i svoystva chuguna s sharovidnym  
grafitom. Moskva, Mashgiz, 1962. 351 p. (MIRA 15:4)  
(Cast iron—Metallography)

GIRSHOVICH, N.G.; NEKHENDZI, Yu.A.

Effect of inoculation on the crystallization of alloys. Lit. proizv.  
no.5:19-25 My '62; (MIRA 16:3)  
(Founding) (Crystallization)

GIRSHOVICH, N.G.; SIMANOVSKIY, M.P.

Bending of castings during cooling in the mold. Lit. proizv.  
no.2:22-26 F '63. (MIRA 16:3)  
(Metal castings--Defects) (Thermal stresses)

GIRSHOVICH, N.G.; LEBEDEV, K.P.; NEKHENDZI, Yu.A.

Expansion of ferrous and nonferrous alloys before shrinkage. Lit.proizv.  
no.4:23-28 Ap '63. (MIRA 16:4)  
(Alloys) (Expansion (Heat))

GIRSHOVICH, N.G.

Mechanism and calculations of casting sags in molds. Lit.  
proizv. no.6:47-48 Je '63. (MIRA 16:7)

(Founding--Defects)

GIRSHOVICH, N.G.; NEKHENDZI, Yu.A.

Theoretical basis of investigating the founding properties of  
alloys. Trudy LPI no. 224:24-60 '63. (MIRA 17:9)

GIRSHOVICH, N.G., doktor tekhn.nauk; TOFFE, A.Ya., kand.tekhn.nauk; ALEKSEYEV,  
A.G., inzh.

Effect of shape on the shrinkage defects and the accuracy of iron  
castings. Lit. proizv. no.7:29-32 JI '65.

(MIRA 18:8)

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CIA-RDP86-00513R0005

I 23859-66

ENT(1)/ENP(m)/ENA(2)/ENC(m)-C/BNR(1)

SOURCE CODE: UR/0421/66/000/001/0151/0153

ACC NR: AP6010858

AUTHOR: Girshovich, T. A. (Moscow)

ORG: none

TITLE: A turbulent jet in a drifting flow

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 1, 1966, 151-153

TOPIC TAGS: fluid mechanics, jet stream, jet flow, shear stress, pressure gradient, velocity profile

ABSTRACT: The problem of two-dimensional jet issuing from an infinite thin slot and expanding at a certain angle toward an infinite flow is approximately formulated. It is assumed that the jet axis is a streamline, the shear stress on the axis is equal to zero, and the transverse displacement of the jet axis is constant. The solution is obtained by using the well-known integral method of the boundary layer theory. The jet parameters such as axial velocity the external and internal boundaries of the jet are determined. The velocity profile is obtained by the Prandtl formula for shear stress. It is shown that the longitudinal and transverse pressure gradients have no effect on the relative velocity profile. Orig. art. has: 1 figure and 18 formulas. [AB]

SUB CODE: 20/ SUBM DATE: 20Mar65/ ORIG REF: 007/ OTH REF: 002

Cord 1/1dda

ACC NR: AP6034548 SOURCE CODE: UR/0421/66/000/005/0121/0126

AUTHOR: Girshovich, T. A.

ORG: none

TITLE: Theoretical and experimental study of a flat turbulent jet in a cocurrent flow

SOURCE: AN SSSR. Izvestiya. Mekhanika zhidkosti i gaza, no. 5, 1966, 121-126

TOPIC TAGS: jet flow, jet mixing, jet propulsion, ~~air-breathing engine~~ turbulent jet, turbulent mixing

ABSTRACT: An analysis was made of the initial section of a flat turbulent jet discharging into a cocurrent stream, and the results were compared with experimental data. The analysis was made in a system of curvilinear orthogonal coordinates where the curved jet axis was taken as the abscissa and the normal to it as the ordinate. The following assumptions were made: the jet axis is the zero flow line; the curvature radius of the jet axis is constant in the initial section; in the flow core, which has a constant total pressure, the transverse velocity is considerably smaller than the longitudinal velocity; the mixing path lengths are different in the external and internal mixing zones; the

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ACC NR: AP6034548

mixing path length is proportional to the thickness of the mixing zone; and in each mixing zone the velocity profiles are similar. The following system of ordinary differential equations was derived and solved on an electronic computer:

$$\begin{aligned}
 f_1 b_1' + f_2 y_{21}' + f_3 &= 0, \quad f_4 b_1' + f_5 y_{21}' + f_6 = \pm \frac{103}{35} \beta^2 (u_{11} - u_{21})^2, \\
 \left( \beta^2 = \frac{f_1}{b_1^2} - \frac{f_2}{b_2^2} \right) \\
 f_1 &= \frac{9}{70} u_{21}^2 - \frac{13}{35} u_{11}^2 + \frac{17}{70} u_{11} u_{21} + \frac{bi}{35R} (6u_{11}^3 - 20u_{21}^3 + 9u_{11} u_{21}^2) \\
 f_2 &= \frac{bi}{70R} (78u_{11}^3 + u_{11} u_{21}^2 + 26u_{21}^3) - u_0 (u_{11} - u_{21}) \exp \left[ -\frac{b_{01} + y_{21}}{R} \right] \\
 f_3 &= \frac{u_{21}^2}{70} \left[ b_1 (53u_{21} - 18u_{11}) + \frac{b_1^2}{R} (40u_{21} + 9u_{11}) \right] \\
 f_4 &= -\frac{1}{140} (43u_{11}^3 + 113u_{21}^3 + 27u_{11}^2 u_{21} + 97u_{11} u_{21}^2) + \\
 &\quad + \frac{bi}{R} \left( \frac{155}{462} u_{11}^3 - \frac{241}{385} u_{11}^2 u_{21} + \frac{2033}{770} u_{11} u_{21}^2 - \frac{1}{110} u_{21}^3 \right) \\
 f_5 &= -u_0 (u_{11}^3 - u_{21}^3) \exp \left[ -\frac{b_{02} + y_{21}}{R} \right] + \frac{bi}{R} \left( \frac{43}{28} u_{11}^3 + \frac{27}{35} u_{11}^2 u_{21} + \right. \\
 &\quad \left. + \frac{151}{140} u_{11} u_{21}^2 + \frac{43}{70} u_{21}^3 \right) \\
 f_6 &= \frac{u_{21}^2 b_1}{140} (59u_{21}^2 + 27u_{11}^2 - 86u_{11} u_{21}) + \frac{b_1^2}{11R} \left( \frac{61}{21} u_{11}^3 + \frac{523}{21} u_{11} u_{21} - \frac{37}{6} u_{11}^2 \right) u_{21}^2
 \end{aligned}$$

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where  $i = 1$  for the external mixing zone;  $i = 2$  for the internal mixing zone;  $u_{0,i}$  = the velocity at the outer boundary of the mixing zone;  $u_{11}$  = the velocity at the boundary of the flow core; and  $b_i$  = the width of the mixing zone. Results calculated by the equation are plotted in Fig. 1. For purposes of comparison, experiments were conducted with a

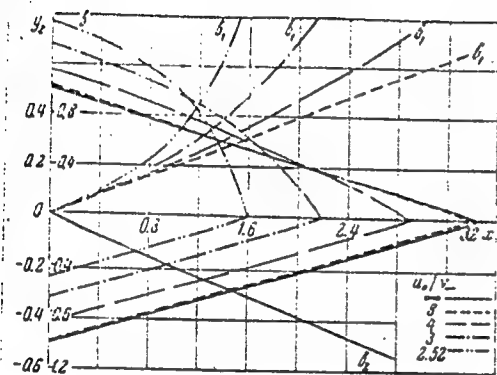


Fig. 1. Change of the boundaries of the flow core and thickness of the mixing zone for  $\delta = 0.09$  for various velocity ratios of the jet and the cocurrent stream.

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1.5-mm wide nozzle, 300 mm long to study the main section and with a 5-mm wide nozzle, 100 mm long for the initial section. The theoretical solution quantitatively and qualitatively described the jet propagation with the exception of the jet axis which was actually more curved than the theoretically calculated axis. Orig. art. has: 7 figures and 8 formulas. [WA-68]

SUB CODE: 20/ SUBM DATE: 23Jun66/ ORIG REF: 003

GIRSHOVICH, V., inzh; YUROV, I., inzh.

New carburetors for "Moskvich" automobiles. Za rul. 17 no.11:  
18-20 N '59. (MIRA 13:4)

1. Leningradskiy karbyuratornyy zavod imeni Kuybysheva.  
(Automobiles--Engines--Carburetors)

GIRSHOVICH, Ye.I.

Treatment of closed fractures of the diaphysis of the hip. Trudy  
Len.gos.nauch.-issl.inst.travm.i ortop. no.7:105-119 '58.

(MIRA 13:6)

1. Iz otdeleniya neotlozhnoy travmatologii Leningradskogo insti-  
tuta travmatologii i ortopedii i travmatologicheskogo otdeleniya  
bol'nitsy imeni Volodarskogo.

(HIP JOINT--FRACTURE)

GIRSHOVICH, Ye.I.

Reduction of dislocations of the lower jaw. E.I. Girshovich.  
Ortop.travm. i protez 19 no.2:67-68 Mr-Ap '58      (MIRA 11:5)

1. Iz bol'nitsy im. Volodarskogo (glavnyy vrach - N.M.  
Krasil'nikov), Leningrad.  
(JAWS--DISLOCATION)

GIRSHOVICH, Y. I.: *Medits. Med. Sci. (Nise)* -- "The treatment of concealed breaks of the diaphysis of the femur". Leningrad, 1959. 16 pp (Mir Health USSR, Leningrad Med Inst in Acad I. P. Pavlov), 200 copies (KL, No 17, 1959, 110)

GIRSHOVICH, Ye.S., kandidat tekhnicheskikh nauk.

Introducing cermet tools in the plants of the ministry. Stroil.  
dor.mashinostr. i no.1:28-29 Ja 56. (MLRA 10:1)  
(Cutting tools) (Powder metallurgy)

GIRSHOVICH, Ye.S., kand.tekhn.nauk. .

Economic efficiency of using bimetallic and screwed bushings.  
Trakt. 1 sel'khozmasb. no.11:42-43 N '59. (MIRA 13:3)

1. Nauchno-issledovatel'skiy institut Traktorosel'khozmasb.  
(Bearings(Machinery))

GIRSHOVICH, Ye.S., kand.tekhn.nauk

Machining a group of parts on a quickly readjusted machine-tool unit. Trakt. i sel'khoz mash. 30 no. 12:34-36 D '60.

(MIRA 13:12)

1. Nauchno-issledovatel'skiy institut tekhnologii traktornogo i sel'skokhozyaystvennogo mashinostroyeniya.  
(Machine-shop practice)

GIRSHOVICH, Ye.S., kand.tekhn.nauk; TRIFONOV, O.N., inzh.

Technological parameters of cutter heads of small milling machinery units. Trakt.i sel'khoz mash. 31 no.2:40-42 F '61. (MIRA 14:7)

1. Nauchno-issledovatel'skiy institut tekhnologii traktornogo i sel'skokhozyaystvennogo mashinostroyeniya.  
(Milling machines)

GURCHOVICHUS, S.Kh.; GURCHOVICHUS, I.Kh.

Three-dimensional field of a magnetic recording head. Radio-  
tekhnika 19 no. 4:76-79 Apr '64. (MIRA 17:5)

1. Deystvitel'nyye chleny Nauchno-tekhnicheskogo obshchestva  
radiotekhniki i elektrosvyazi Izdatel'stvo.

6(5)

06267  
SOV/107-59-6-31/50

AUTHORS: Naydenov, A., Vorontsov, N., Girshovichus, S.

TITLE: Tape Recorder "El'fa-10"

PERIODICAL: Radio, 1959, Nr 6, pp 27-29 (USSR)

ABSTRACT: The Elektrotekhnicheskiy zavod "El'fa" (Electrical Equipment Plant "El'fa") developed the tape recorder "El'fa-10" ("Spalis") which is now in production. The electrical parameters of the tape recorder are in accordance with GOST 8088-56 for group "19". The tape winding mechanism is explained in three diagrams, Figures 1-3. The principal circuit diagram is shown in Figure 4. The tape recorder is designed for a tape speed of 190.5 mm/sec and for 360-m spools; recording or play-back on one track lasts 30 minutes. The second track is used by changing the spools. The recording level is controlled by a "magic eye", tube 6Ye5S. A keyboard-type switch is used. The three-stage preamplifier consists of one

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30V/107-59-6-31/50

Tape Recorder "El'fa-10"

6N2P and one triode of tube 6N1P. The other triode of the 6N1P works in the magnetizing and erasing generator. The generator consists of a tapped-coil circuit and works on 25 kc. The magnetizing current is 1.2 milliamps, the erasing current 45 milliamps. The LF output stage consists of one 6P14P tube. A full-wave rectifier is used, consisting of one 6Ts4P. For reducing background noise, the heating filament of tube 6N2P is fed by dc from a rectifier consisting of diodes DG-Ts24. The tone color control provides a steep slope of the frequency response curve at a frequency of 8,000 cycles of not less than 10db. At a frequency of 1,000 cycles, the voltage change does not exceed 3 db. Power consumption is 75 watts from 127- or 220-volt mains. Dynamic microphone MD-41 is used. The tape recorder is delivered with three spools, two of which hold tape. One of the spools is fastened inside of the cover. There are 1 circuit diagram, 3 diagrams, 1 sketch, and 2 tables.

Card 2/2

GIRSHOVICHUS, S.Kh., inzh.; LENDOVER, A.D., inzh.; SEDOV, I.N., inzh.

The "GARSAS" dictaphone. Mekh.i avtom.proizv. 1' no.9147-50 S  
'63. (MIRA 16:10)

GIRSHOVICHUS, S.Kh.; GIRSHOVICHUS, I.Kh.

Three-dimensional field of a magnetic recording head. Radio-  
tekhnika 19 no. 4:76-79 Ap '64. (MIRA 17:5)

1. Dostavitel'nyye chleny Nauchno-tekhnicheskogo obshchestva  
radiotekhniki i elektrosvyazi imeni Popova.

1. GORB, T. V., Prof.; GIRSHPAK, V. G.
2. USCH (600)
4. Karakul Sheep - Ukraine
7. Feeding and maintenance of Karakul ewes in the Carpathians. Изв. Лесовод. № 1, 1953.
9. Monthly List of Russian Accessions, Library of Congress, June 1953, Uncl.

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GIRSETEL', B.I.

DECEASED

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c1961

SEE ILC

CONSTRUCTION INDUSTRY

ZHILKIN, I., arkhitektor; GIRSHTEL', G., inzh.

Factory finishing of wall slabs. Zhil. stroi. no.4:19-21 '62.  
(MIRA 15:5)

(Finishes and finishing) (Concrete walls)

ZHILKIN, I., arkhitekt; GIRSHTEL', G., inzh.

Industrial wastes for finishing wall panels. Zhil. stroi. no.1:  
20-22 '62. (MIRA 16:1)

(Finishes and finishing)  
(Lugansk Economic Region—Walls)

SHUPOV, L.P.; BELONozhko, I.F.; GISHCHUK, B.V.; KONONOVA, A.P.; MASLENNIKOVA, K.P.; SVERDEL', E.I.; ARTEMOVA, A.A.

Selection of a synthetic fiber filter cloth for thin iron ore concentrators. Gor.zhur. no.10:60-62 O '64.

(MIRA 18:1)

1. Nauchno-issledovatel'skiy i proyektnyy institut po obogashcheniyu i aglomeratsii rud chernykh metallov, Krivoy Rog (for Shupov, Belonozhko, Gishchuk). 2. Ukrainskiy nauchno-issledovatel'skiy institut po pererabotke iskusstvennogo i sinteticheskogo volokna (for Kononova, Maslennikova). 3. Yuzhnyy gorno-obogatitel'nyy kombinat, Krivoy Rog (for Sverdel', Artemova).

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GIRSHVAL'D, L.Ya.

[History of the invention of logarithms] Istoriia otkrytiia logarifmov.  
Khar'kov, Izd-vo gos. univ., 1952. 31 p. (MLRA 9:9)  
(Logarithms)

GIRSHVAL'D L. Ya.

(MLRA 10:7)

(Kharkov--Probabilities--Study and teaching)

GORDEVSKIY, Dmitriy Zakharovich; LEYBIN, Aleksandr Sergeyevich;  
GIRSHVAL'D, L.Ya., dots., retsenzent; GAYDUK, Yu.M.,  
retsenzent; BLANK, Ya.P., prof., otv. red.; NESTERENKO,  
A.S., red.

[Popular introduction to multidimensional geometry] Popu-  
liarnoe vvedenie v mnogomernuiu geometriiu. Khar'kov, Izd-  
vo Khar'kovskogo univ., 1964. 190 p. (MIRA 17:5)

12442-55 INT(1)/ECO 1P44 AV51R ON

ACCESSION NR: AT4047618

5/2511/84/000/ 64/0021/0025

AUTHOR: Vorobyeva, Ye. V. (Candidate of geographical sciences); G. S. Vorobyeva

TITLE: Characteristics of the ice-free season for the European territory of the USSR and western Siberia in relation to the intensity of circulation in the Arctic sector of the northern hemisphere

SOURCE: Leningrad, Glavnaya geofizicheskaya observatoriya, Trudy, no. 104, 1964, Obshchaya i sinopticheskaya klimatologiya (General and synoptic climatology), 21-28

TOPIC TAGS: atmospheric circulation; climatology; weather forecasting; long-range weather forecasting

ABSTRACT: In an after investigation (Sopryazhennost' atmosferykh protsessov v severnom polusharii, Gidrometeoizdat, Leningrad, 1962), Ye. V. Vorobyeva demonstrated that the development of atmospheric processes in the Arctic

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ACCESSION NR: AT4047618

sector; the atmospheric processes in the Eurasian part of the hemisphere have a more meridional character. In the above-cited reference the study was for the winter season only, creating the impression that the mentioned properties of atmospheric circulation may be most characteristic for that season because at that time the meridional temperature and pressure gradients between the equator and pole are great and therefore the intensity of zonal transport is maximal. In this

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CIA-RDP86-00513R000  
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VOROB'YEVA, Ye.V., kand. geofraf. nauk; GINSKAYA, E.I.

Characteristics of the spring--summer season for the  
European territory of the U.S.S.R. and western Siberia  
in connection with the circulation intensity in the American  
sector of the Northern Hemisphere. Trudy GGO no.164:21-28 '64.  
(MIRA 17:9)

GIRSKIY, V.A.

BOTVINKO, M.Ye., laureat Stalinskoy premii, inzhener; GIRSKIY, V.A., laureat Stalinskoy premii, inzhener; GORBATOV, N.A., laureat Stalinskoy premii, inzhener [deceased]; LAPIN, F.A., laureat Stalinskoy premii, inzhener; BROMBERG, A.A., professor, redaktor; ARSEN'YEV, A.A., kandidat tekhnicheskikh nauk; TOVSTOLUZHSKIY, N.I., redaktor; KOVALIKHINA, N.F., tekhnicheskii redaktor

[Concrete, asphalt concrete and rock crushing plants in road building; planned designs and standard equipment] Betonnye, asfal'tobetonnye i kammedrobil'nye zavody na dorozhnom stroitel'stve; proektnye reshenia i tipovoe oborudovanie. Pod red. A.A.Bromberga. Moskva, Ministerstvo avtomobil'nogo transporta i shosseinykh dorog SSSR. Pt. 1. [Rock crushing, cement, and concrete plants and centers for the manufacture of concrete plates and reinforced concrete building units] Kammedrobil'nye i tsementobetonnye zavody tsakhi i bazy dlia isgotovlenia betonnykh plit i zhelezobetonnykh detalei. 1954. 160 p. [Microfilm]  
(Concrete) (Asphalt concrete) (MLRA 7:10)  
(Stone, Crushed)